

skill in the art and thus require no further explanation as to how to cut the sheathing. Thus the rejection is overcome.

In response to the rejection of claims 5, 6, 10, and 11 under 35 U.S.C. § 112, first paragraph, claims 5, 6, 10, and 11 have been clarified to positively recite, in part, that the backside O-rings are applied to the adaptor on the bearing side of the anchor before concrete is poured on the bearing side of the concrete construction joint. Accordingly, the rejection is overcome.

Claims 12 and 25 have been clarified to positively recite, in part, that the exposed tendon sheath is confined to either the body or the cover of the anchor. Accordingly, the rejection is overcome.

Claim 51 has been rejected under 35 U.S.C. § 102(b) as being anticipated by Sorkin, '185. Claim 51 recites, in part, an intermediate anchor for anchoring a tendon in concrete wherein an O-ring is within the intermediate anchor and can move freely over the sheath of the tendon during installation of the tendon through the intermediate anchor. The O-ring can move freely over the sheath because its inside diameter is sufficiently larger than the outside diameter of the sheath covering the tendon.

By comparison, Sorkin '185 teaches using O-rings or annular seals (66, 82, 78) to provide a liquid-tight seal within the split-tubular membrane members (44, 48). The O-rings (82, 66, or 78) of Sorkin are fitted to the exact size of the tendon (76) and thus do not slide. Depending upon the O-ring used in Sorkin, each O-ring will fit tightly over either the sheathed (76) or unsheathed portion (72) of the tendon (See column 6, lines 25-54). For example, O-ring 78 forms a liquid-tight seal between the unsheathed portion (72) of the tendon (18), while O-ring (66) forms a liquid-tight seal between the sheathed portion (76) of the tendon (18). The examiner's reference to "O-rings that slide over the tendon" (Office Action's referral to column 6, lines 55-60 of Sorkin on page 3, paragraph 9) is actually related to the discussion of sliding the split tubular membranes (44, 48) over the tendon (76) until the exposed tendon (72) is covered by the membranes. However, the membranes 44, 48 are not O-rings and the membranes 44, 48 can only be installed as stated, before the split tubular membranes (44, 48) have been zip-locked into place. Therefore, the rejection is overcome.

The rejection of claim 1 under 35 U.S.C. § 103 is fatally flawed and must be withdrawn. Claim 1 positively recites, in part, a method comprising (1) placing an intermediate anchor having a wedge hole at concrete construction joint and (2) making a

single cut circumferentially around the sheathing inside the wedge hole. After the concrete has been poured and settled on the bearing side of the concrete construction joint, the cut sheathed tendon is tensioned, which causes the sheathing to pull away from the single cut and thus creates an exposed portion of the tendon which receive the wedges.

By comparison, Reigstad *et al.* and Sorkin do not teach or even placing a sheathed tendon into a wedge hole of an intermediate anchor and then cutting the sheathing inside the wedge hole. Both references discuss lining up the appropriate point on the sheathed tendon where the exposed region will be placed into the intermediate anchor and then cutting a section of sheathing from this part of the tendon. Neither reference teaches or suggests making a circumferential cut while the tendon is in the wedge hole to minimize the length of exposed tendon. In fact, both references teach precisely the opposite, i.e., cutting outside of the wedge hole and the anchor body in order to present a lengthy exposed portion of the tendon. Moreover, modifying Sorkin to place the cut inside the wedge hole would require one to discard the expressly claimed tubular membranes 44, 48, or at least render these membranes entirely superfluous. Similarly modifying Reigstad would cause one to discard the expressly claimed taped and wrapped aspect of that reference. Thus, both references teach away from what is claimed, and there would be no basis to modify either reference without ignoring or discarding these express teachings. Thus, there would be no basis to make the modifications or the combination of all and there cannot be a *prima facie* case of obviousness and the rejection must be withdrawn.

The rejection of claim 12, which has been amended to recite, in part, that the exposed portion of the tendon is confined to the cover, must be withdrawn. Sorkin expressly teaches removing enough of the tendon sheathing to provide an area of exposed tendon (18) for tensioning by the wedges located in the intermediate anchor (14) (col. 2, lines 26 and 27, column 4, lines 46-51). The unsheathed portion of the tendon (72) that extends out from the stressing side (50) and the bearing side (42) of the intermediate anchor is properly sealed with split tubular members (44, 48) that are fitted with an annular seal or O-rings (66, 82, 78). Thus, the exposed portion is plainly not confined to the cover. Further, as outlined above, there would be no suggestion to modify Sorkin to reach the claimed invention, nor could any such modification to Sorkin be made without destroying the express teachings of the reference. Thus, there cannot be a *prima facie* case of obviousness.

Similarly, Reigstad *et al.* also expressly teachings stripping the sheathing (52) from the tendon (50) such that the exposed tendon is not confined to the intermediate anchor. Tape

(60) or heat shrink tubes (180, 182) are used to seal the exposed tendon between a pair of conduits (58) on either end of the intermediate anchor and the sheathed portion of the tendon. The conduits are attached to the both ends of the intermediate anchor and feature either plugs (62) or reducers (72). Either type of conduit requires grease as a sealant to protect the exposed tendon within the intermediate anchor. Tape or heat shrink tubes prevent liquid intrusion to the exposed tendon outside of the intermediate anchor. See column 3, lines 66 to column 4, lines 5. Further, as outlined above, there would be no suggestion to modify Reigstad *et al.* to reach the claimed invention, nor could any such modification to the reference be made without destroying the express teachings of the reference. Thus, there again cannot be a *prima facie* case of obviousness.

Further, the office action alleges that Sorkin uses tape for sealing any exposed portion of the tendon. Sorkin, however, teaches using only the split tubular membranes as liquid-tight sealants. Sorkin actually teaches away from using tape by stating "the extensive practice with this technique (*i.e.* taping) has shown that it is generally ineffective for preventing liquid intrusion into the interior of the tendon or into the interior of the intermediate anchorage (see column 2, lines 60-62 of Sorkin)." Thus, upon reading Sorkin one would plainly not combine Sorkin with the Reigstad reference, which expressly teaches taping. Thus, there is no basis in the references for making the combination of Sorkin with Reistad and the rejection must be withdrawn for this reason as well.

Claims 2 through 11 depend from claim 1, either directly or through intervening claims. Accordingly, claims 2 through 11 are in allowable form.

Claim 36, which is a method claim, is also in allowable form for the same reasons set forth above with respect to claim 1. Claims 37 through 50, which depend from claim 36, either directly or through intervening claims, are also allowable.

The rejection of claim 12 is also fatally flawed. Claim 12 has been clarified to positively recite, in part, an intermediate anchor having a backside, a frontside, a cover, and a wedge hole arranged to receive a wedge and backside and frontside seals at the backside and frontside, respectively, of the intermediate anchor. The seals are arranged to seal an exposed portion of the tendon within the cover of the anchor, and wherein the exposed portion of the tendon is confined to the cover of the anchor.

By comparison, neither of the cited references teach or even suggest confining the exposed tendon to the cover of the anchor. Sorkin uses split tubular membranes to seal the

exposed tendon beyond the frontside and backside of the intermediate anchor. Reigstad *et al.* use tape to seal exposed tendon beyond the frontside or backside of the intermediate anchor. Neither reference contemplate keeping the exposed tendon confined solely to the cover of the intermediate anchor. Accordingly, claim 12 and the claims dependent thereon (13-24) are in allowable form.

Claim 25 is a composition claim reciting steps similar to independent claim 12. As such, it is believed that claim 25 is allowable for the reasons set forth above with respect to claims 1 and 12. Claims 26 through 35 depend from claim 25 and recite subject matter corresponding to claims 13 through 24. Because all claims dependent from an allowable independent claim are allowable, and for at least the same reason claim 25 is allowable, claims 26 through 35 are also allowable.

New claims 52-55 are also in allowable form. New claims 52-55 are not taught or even suggested by the cited art.

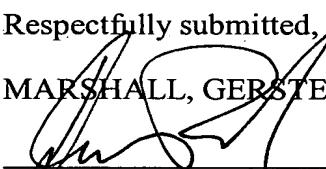
Attached hereto is a "Version With Markings To Show Changes Made".

In view of the foregoing, the above-identified application is in condition for allowance. In the event there is any remaining issue that the Examiner believes can be resolved by a telephone conference, the Examiner is respectfully invited to contact the undersigned attorney at (312) 474-6612.

Respectfully submitted,

MARSHALL, GERSTEIN & BORUN

By



David C. Read (Reg. No. 39,811)
6300 Sears Tower
233 South Wacker Drive
Chicago, Illinois 60606-6402
(312) 474-6300

November 19, 2002

APPENDIX A

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Please amend the claims as follows:

5. (Amended) The method of claim 1 further comprising attaching an adaptor to the intermediate anchor on the bearing side and inserting an O-ring within the adaptor so as to engage the adaptor and the tendon before concrete is poured on the bearing side of the concrete construction joint.

10. (Amended) The method of claim 1 further comprising:

attaching an adaptor to the intermediate anchor on the bearing side;

attaching a backside bushing to the adaptor, the backside bushing and the adaptor attached to the intermediate anchor before concrete is poured on the bearing side of the concrete construction joint;

attaching a cap to the intermediate anchor on a stressing side of the construction joint;
and;

attaching a frontside bushing to the cap

11. (Amended) The method of claim 10 further comprising:

inserting a backside O-ring within the adaptor so as to engage the adaptor and the tendon before concrete is poured on the bearing side of the concrete construction joint; and

inserting a frontside O-ring within the cap so as to engage the cap and the tendon.

12. (Amended) An intermediate anchor system for a tendon comprising:

an intermediate anchor having a backside, a frontside, a body, and a wedge hole arranged to receive a wedge; and,

backside and frontside seals at the backside and the frontside, respectively, of the intermediate anchor, wherein the backside and frontside seals are arranged to seal an exposed portion of the tendon within the [wedge hole] the body, and wherein the exposed portion of the tendon is confined to the [wedge hole] body.

25. (Amended) An intermediate anchor system comprising:

a tendon having a greased cable within a sheathing, wherein the tendon has an exposed portion, and wherein the exposed portion has no sheathing;

an intermediate anchor having a backside, a frontside, a cover, and a wedge hole defined within the cover and arranged to receive a wedge, wherein the sheathed tendon extends through the intermediate anchor so that the exposed portion is within the [wedge hole] cover;

a wedge within the wedge hole and clamped to the exposed portion of the sheathed tendon;

a backside seal engaging the sheathed tendon at the backside of the intermediate anchor; and,

a frontside seal engaging the sheathed tendon at the frontside of the intermediate anchor, wherein the backside and frontside seals seal the exposed portion of the sheathed tendon.

51. (Amended) An intermediate anchor for anchoring a tendon in concrete, the tendon surrounded by a sheath having an outside diameter, the intermediate anchor having an O-ring to provide a seal between the intermediate anchor and the tendon, the O-ring having an inside diameter, the inside diameter of the O-ring being sufficiently larger than the outside diameter of the [tendon] sheath in order to permit the O-ring to move freely over the [tendon] sheath during installation.

Please add new claims 52-54.

52. (New) The intermediate anchor system of claim 51 including an adaptor sized to receive the tendon and the O-ring, and a bushing, the bushing is the adaptor arranged to compress the O-ring around the tendon.

53. (New) The intermediate anchor system of claim 52, wherein the bushing is threaded is internally threaded and the adaptor is externally threaded.

54. (New) The intermediate anchor system of claim 12, wherein the exposed portion of the tendon is confined within the anchor cap.

55. (New) The intermediate anchor system of claim 25, wherein the exposed portion of the tendon is confined within the anchor cap.